

What is claimed is:

1. An interface method for transferring image data between a host system for executing an application and a display connected to the host system, comprising the steps

5 of:

managing image data by the host system, belonging to a window in accordance with a sub-area obtained by dividing a display area of the display, for the window that is a region making sense in an image space of which the application is conscious;

transferring the image data managed by the host system as a packet unit to the display via the interface;

developing the image data, transferred to the display via the interface, in a panel memory of the display, and grasping conditions of a transfer error in the transferred image data in a unit of the window; and

grasping by the host system the conditions grasped through the display.

20 2. The interface method according to claim 1, wherein a re-transfer of the image data from the host system to the display through the interface is executed based on the conditions of the transfer error grasped by the host system.

3. The interface method according to claim 2, wherein the re-transfer of the image data is executed for image data of all sub areas belonging to the window, and developing in the panel memory is again executed only for a sub area in which the transfer error occurred.

4. The interface method according to claim 2, wherein the re-transfer of the image data is executed for a sub area in which the transfer error is grasped.

5. An image display system comprising:

a host system for executing an application;

a display for displaying an image, the display being connected to the host system; and

an interface for connecting the host system and the display to each other, wherein the interface has a first interface for executing a transfer of a large capacity of data from the host system to the display and a second interface for executing a transfer of a small capacity of data from the display to the host system, which is not zero but smaller than the quantity of data transferred by the first interface.

6. The image display system according to claim 5, wherein the first interface transfers the data after packetizing the data, and the second interface transfers the data used

for an error handling among the data transferred by the first interface.

7. The image display system according to claim 5, wherein  
5 the host system transfers image data before developing through the first interface, and the display includes a panel memory for developing the image data transferred through the first interface, and transfers information relating to a transfer error through the second interface,  
10 which occurred in transferring the image data developed in the panel memory.

8. The image display system according to claim 5,  
wherein the first interface includes a bi-directional  
15 high speed transfer line, and transfers the data in synchronization with high speed clock signals obtained by multiplying clock signals, and  
the second interface transfers the data in  
synchronization with clock signals which are not multiplied  
20 for the bi-directional high speed transfer line used for the first interface.

9. The image display system according to claim 5,  
wherein the first interface includes a uni-directional  
25 high speed transfer line, and  
the second interface includes a bi-directional low

speed transfer line.

10. A host device connected to a display for displaying an image through an interface, comprising:

5 a system bus for receiving image data from an application executed; and

transfer means for dividing the image data received through the system bus so that each of the divided image data corresponds to a corresponding sub area obtained by  
10 parceling a display area of the display, and for transferring each of the divided image data in the form of packet after packetizing each of the divided image data as a unit.

15 11. The host device according to claim 10, wherein the system bus receives the image data in accordance with a window that is a region making sense collectively in an image space of which the application is conscious, and the transfer means transfers the image data to the display so  
20 that each of the divided image data corresponds to the corresponding sub area belonging to the window.

12. A host device which executes an application and is connected to a display for displaying an image through an  
25 interface, comprising:

image data transfer means for transferring image data

to the display after packetizing the image data into a unit  
so as to correspond to a predetermined area obtained by  
parceling a window that is a display area making sense  
collectively in an image space of which the application is  
5 conscious; and

error condition receiving means for receiving error  
conditions with reference to the image data transferred to  
the display by the image data transfer means, in the form  
of a predetermined collective unit from the display.

10 13. The host device according to claim 12, wherein the  
predetermined collective unit with which the error  
condition receiving means receives the error conditions is  
a unit of the window developed by the display.

15 14. The host device according to claim 12, wherein the  
image transfer means re-transfers the image data based on  
the error conditions received by the error condition  
receiving means.

20 15. An image display device comprising:

a panel for displaying an image;

receiving means for receiving image data through a  
first interface from a host system which executes an  
25 application, the first interface transferring a large  
quantity of image data; and

notifying means for notifying information indicating a transfer error with respect to the image data received by the receiving means to the host system through a second interface transferring a smaller quantity of image data than the first interface.

16. The image display device according to claim 15,

the image display device further comprising:

a panel memory for developing the image data received by the receiving means,

wherein the notifying means notifies collectively the information relating to the transfer error in a unit with which a refreshment of the panel is performed using the image data developed in the panel memory.

17. The image display device according to claim 15, wherein the notifying means notifies information indicating the transfer error when a still picture is displayed in the panel, and does not notify the information indicating the transfer error when a moving picture is displayed in the panel.

18. An image display device comprising:

a panel for displaying an image;

receiving means for receiving image data packetized from a host system which executes an application;

a panel memory for developing the image data received by the receiving means; and

transfer error notifying means for recognizing a transfer error with respect to the image data received by the receiving means, and for notifying information relating to the transfer error to the host system, the transfer error being recognized in a unit developed in the panel memory.

10 19. The image display device according to claim 18, wherein the transfer error notifying means comprises an identification information storing section for storing identification information of the image data which caused the transfer error and notifies the identification  
15 information stored in the identification information storing section to the host system.

20 20. The image display device according to claim 19, wherein the identification information storing section has error address registers for identifying a packet received and a pointer register indicating the number of the error address registers.

25 21. A display interface which transfers image data from a host system for executing an application to a display for executing an image display, comprising:

variable-length packet data for transferring image data obtained by dividing an image space, of which the application is conscious, into a predetermined unit, the image data being packetized; and

5 a control line for indicating a valid packet period in the variable-length packet data.

22. The display interface according to claim 21, wherein the control line uses an enable signal including  
10 predetermined bits in the interface for transferring the packet data.

23. A display interface which transfers image data for each sub area belonging to a window to a display, the image data  
15 being transferred after making the image data have a packet structure and the window being a region making sense collectively in an image space of which an application is conscious, wherein the packet structure comprises:

a header portion including information indicating  
20 which window the packet belongs to;

a body portion including image data belonging to the sub area for the display and information relating to an address of the sub area; and

a footer portion including information for confirming  
25 a transfer error.



24. The display interface according to claim 23, wherein the header portion includes information for identifying whether the packet indicates a re-transfer for transferring the image data again.

5

25. The display interface according to claim 23, wherein the footer portion has a bit array for confirming a transfer error.